



STATE OF MAINE

Department of Environmental Protection

MAIN OFFICE: RAY BUILDING, HOSPITAL STREET, AUGUSTA
MAIL ADDRESS: State House Station 17, Augusta, 04333

207-233-7688

JOHN R. McKERNAN, JR.
GOVERNOR

August 15, 1991

DEAN C. MARRIOTT
COMMISSIONER

Mr. James Shafer
Department of the Navy, Northern Division
Naval Facilities Engineering Command
Building 77-L
Philadelphia Naval Shipyard
Philadelphia, PA 19112-5094

Re: Naval Air Station Brunswick, Draft Proposed Plan-Eastern
Plume, July, 1991, by E.C. Jordan Co.

Dear Mr. Shafer:

The Maine Department of Environmental Protection (MEDEP) has completed its review of the Draft Proposed Plan-Eastern Plume, which was submitted to the MEDEP by E.C. Jordan Co. on July 19, 1991 on behalf of the U.S. Department of the Navy for the Naval Air Station Brunswick (NASB) Site.

The MEDEP wishes to submit the following comments to be considered and addressed. EPA, MEDEP and NORDIV project managers should consult on any differences to avoid unnecessary disagreements being elevated to dispute resolution.

General Comments:

- 1.) The MEDEP had expected to be presented with the opportunity to review a plan which included a specific depth of extraction wells, anticipated volumes of discharge over time, a specific treatment process, a preferred option for discharge of treated water and target clean-up levels for discharged effluent. Remedial solutions for sites 4, 11, & 13, which are the source areas for the Eastern Plume, are undergoing evaluation in the Draft FS. It is anticipated that this interim plan will be incorporated into the final remedy for these sites. Since this interim measure is intended to be an active part of the final remedial solution for Sites 4, 11, & 13, specific information regarding these items is necessary.

- 2.) The interim objective to contain the toe of the plume to prevent and/or minimize further migration of the Eastern Plume is appropriate. The general description of the extraction well placement seems to achieve these objectives however, the MEDEP would like to review the groundwater flow model used to predict capture zones for each proposed well location and pumping rate scenario.
- 3.) Pumping of the wells at the boundaries of the plume will contain the plume, but will result in very low removal efficiency for the contaminants. Removal efficiency will be considerably higher for the extraction wells near the source. If the Navy wishes to achieve objective 4, outlined on page 5-1 (reduction of the time required for aquifer restoration), some additional extraction wells must be placed near the source in addition to wells near the plume boundaries. When the MEDEP reviews the details of this plan, careful placement of wells and well screens to intersect the most highly contaminated groundwater will be expected.
- 4.) After pumping of the extraction wells begins, the MEDEP expects a demonstration that the capture zones do indeed contain the plume. This will require the placement of observation wells or piezometers to document drawdown of the potentiometric surface. The MEDEP wishes to see the location of these observation points shown as part of the work plan.

Specific Comments:

Page	Section	Comments
1.)	2-1, section 2.1, Public Informational Meeting and Public Hearing:	If the public is expected to formally comment on the Proposed Plan the MEDEP believes it would be appropriate to allow the citizens time to consider the information presented in the informational meeting prior to going on record with their "formal" questions and comments. Perhaps a follow-up informal hearing 1-2 weeks after the informational meeting would be more appropriate. A more detailed explanation of the hearing process is needed.
2.)	2-4, section 2.4, The Navy's Review of Public Comment:	The interim remedy will be submitted to the State of Maine, <u>Department of Environmental Protection</u> for review.

- 3.) 2-5, section 2.5, **Additional Public Information:** Include the MEDEP as an additional source of information for the public.
- 4.) 3-12, figure 3: This figure is ambiguous and will result in confusion of the general public. The figure should be referenced to an east west transect identified on a surface map of the eastern plume (figure 2). Figure 3 should be preceded by a north-south schematic cross section showing plume flow from the source areas towards its expected discharge point near Harpswell Cove.
- 5.) 4-2, section 4.0, **Summary of Site Risks:** The MEDEP suggests that the second sentence be changed to read: "..the interim remedial action is intended to prevent the migration of the plume."
- 6.) 5-2, section 5.0, **Proposed Clean up Objectives and Levels:** The Navy's long term clean up goals for reducing contamination in ground water at NASB is to meet MCL's. If the Maximum Exposure Guidelines are not met, the MEDEP cannot concur with any remedy that does not include permanent institutional controls that will preclude the possibility of future groundwater consumption.
- 7.) 6-1, section 6.0 **Proposed Interim Remedial Action:** Since this is an interim remedial proposal submitted independently of (and before) the Draft FS Report details of the UV/oxidation and air stripping water treatment technologies should not be crossed referenced. An explanation of these technologies needs to be included in the Interim Proposed Plan. Air stripping may involve inherent difficulties with VOC releases.
- 8.) 6-2, section 6.0: Explain how it will be determined that the southern edge of the plume has been contained. An explanation of expected changes in the plume boundary during the utilization of this interim action is needed.

Field sampling is anticipated for monitoring the plume boundary, a sampling plan/schedule should be presented as part of the interim remedy.
- 9.) 6-3, figure 4: The estimated time for design and construction is estimated to be 2 years and 5 months (page 6-6). This represents one half of the anticipated travel time (5 years) for the plume to reach its discharge point near the Harpswell Cove estuary. Identify if this has been taken into account when the proposed locations of the extraction wells, noted in

figure 4, were selected. Identify if the north, east and west boundaries of the plume will be expected to change during the design and construction phase and how this might effect the proposed locations of the extraction wells

- 10.) 6-4, section 6.0: Citizens will most likely question the type of chemical intended for use as an oxidant, the concentration intended for use, and the method of addition of this oxidant to the treatment process. The Proposed Plan should include a reference to a treatability study that will obtain this information.

Identify what types of testing and the frequency of testing that will be done on the treated effluent. Identify the "appropriate discharge standards" that are referred to regarding this discharged effluent.

- 11.) 6-5, section 6.0: Three options for treated effluent have been mentioned. If the Navy wants public reaction to the three options, then the advantages and disadvantages of each option must be discussed.

At the present time, the MEDEP has not thoroughly evaluated the possible discharge options and cannot present a preferred choice until after the Draft FS has been adequately reviewed.

The treatment of discharged effluent to "pretreated requirements" and "appropriate requirements or standards" needs to be defined. The Proposed Plan should refer to the fact that this will be finalized.

If treated effluent is discharged to surface water, the treated discharge must meet Ambient Water Quality Criteria (AWQC) prior to discharge. Also, any discharges to surface water must meet the intent of any relevant permit requirements. The volume of discharge cannot be allowed to result in alterations to the normal stream environment.

- 12.) 8-6, section 8.8, State Acceptance: The final paragraph should be edited to read "The State of Maine and the USEPA have reviewed this Proposed Plan. State and USEPA concurrence with the selected remedy is required under the FFA." The MEDEP feels that it cannot give a final approval to a remedy until it has had the opportunity to evaluate changes to the plan which were requested by other Parties

- 13.) 9-1, section 9.0, Rational: This proposal states that "the clean up goal is to extract groundwater contamination with chemicals at concentrations exceeding drinking water standards." Specifically identify which drinking water standards are referred to in this statement.
- 14.) Glossary, Maximum Exposure Guidelines (MEG's): Change the final sentence of this definition to read: The MEG typically coincides with the federal MCL for each regulated contaminant however, risk based calculations have resulted in some specific MEG's that are set at a more stringent level than the MCL.

If you have any concerns or questions regarding these comments, please contact me at (207) 289-2651.

Sincerely,



Ted Wolfe
Division of Site Investigation and Remediation
Bureau of Hazardous Materials and Solid Waste Control

cc: Michael Barden, MEDEP
Sam Butcher, Harpswell Representative
Meghan Cassidy, EPA
~~Erleen Curry, NASB~~
Mel Dickenson, E.C. Jordan/ABB Environmental
Donald Gerrish, Town of Brunswick
Bruce Hunter, MEDEP
Fred Lavalley, MEDEP
Loukie Lofchie, BACSE
Denise Messier, ME DEP
Susan Weddle, Community Representative

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